LOCAL OUTDOOR RECREATION SURVEY MANUAL

To be Used in Applications to the
Land & Water Conservation Fund Program

Montana Fish, Wildlife & Parks
Parks Division
1420 East Sixth Avenue
P.O. Box 200701
Helena, Montana 59620
Telephone: (406) 444-3750

Introduction

Montana offers its citizens a wide variety of outdoor recreation opportunities, from wilderness preserves to neighborhood parks. Local governments (towns, cities, counties, school districts, Indian tribes) can play an important role by offering their residents access to local facilities. Understanding what recreation opportunities local citizens need is a necessary first step in fulfilling this role. These needs might be for programs, lands, or facilities.

Montana Fish, Wildlife & Parks (FWP) assists local governments in meeting their needs by coordinating Land & Water Conservation Fund (LWCF) grants. The LWCF provides federal dollars on a 50/50 matching basis to states and their political subdivisions for the acquisition and development of outdoor recreation projects. When a local government makes an application for an LWCF grant, part of the application requires an assessment of local outdoor recreation needs. The population segment assessed is determined by the boundaries of the political subdivision applying for the grant. This local needs assessment is intended to aid the state in making wise decisions in the disbursement of LWCF funds.

How are local governments supposed to determine their needs? Needs assessments often utilize the opinions of local leaders and other concerned citizens. However, these assessments are often subjective in nature, and can be overly influenced by the more vocal or visible participants. Instead, resident needs can be assessed in a much more objective manner by directly asking the local citizens what their outdoor recreation needs are. This manual is intended to facilitate this process in a manner that meets the requirements for LWCF grants.

The recommended process involves selecting local households, contacting them by telephone, and inquiring about their outdoor recreational needs. These needs can then be tabulated and documented. Each step in this process must be done carefully to ensure that the results objectively reflect the needs of the area. Because this process involves telephone interviews, it assumes that most of the households in the area have telephones. If this is not the case, the survey instrument and sampling procedure may be modified for personal delivery and self-administration.

This survey instrument is the minimum required by Montana Fish, Wildlife & Parks. The survey instrument may be modified by adding questions or additional detail to existing questions to more thoroughly explore local issues. However, modifications to it by local governments must be approved in writing by FWP. Printing modified survey instruments is a local responsibility.

Selecting Local Households

Whom should we ask? One answer to this question might be to ask everyone in the area what the outdoor recreation needs are. The result would be a "census" of all the residents. Obviously, the resources needed to complete such a survey, especially in large communities, render this option impractical. A reasonable alternative is to "sample" the population of households in the area; in other words, interview a fraction of the households that are representative of the population of the area as a whole. Arriving at a sample that is representative involves minimizing "bias," or influences that tend to make the sample different from the rest of the population of the area. This is generally accomplished through the interjection of "randomness" into the sampling procedure. Randomness reduces bias by ensuring that all households have an equal chance of being included in the sample.

How many households do we need to sample? The exact number depends on your objectives. You are generally interested in determining proportions, in other words, the percentage of households who participate in a certain activity or have a certain opinion. Because outdoor recreation needs vary, you need to contact enough households so the full range of needs are represented, and not allow any one household to overly influence our results. For example, if you only contacted ten households, and three of them said they participated in hangliding, it would be unreasonable to assume that 30% of the area's households engage in this activity.

Thus, it is unlikely that the proportion you arrive at from the sample of households is exactly the true proportion. However, based on probability theory one may delineate a confidence interval and predict, with a degree of confidence, the true proportion lays within this interval. For instance, according to this theory (and using the previous example and formula), you can be 90% confident that the true proportion of hangliders is between 6% and 54% (30% +/- 24%); not a very robust estimate. If 1,000 households had been sampled and 30% had been hangliders, then you could be 90% confident the true proportion of hangliders is between 28% and 32% (30% +/- 2%). Hence, a large sample gives more accurate information than a small one. However, this must be balanced by the real-world sampling constraints faced by most local governments.

For the purposes of your recreation-needs survey, a sample size of 200 households is adequate. This size will allow you to be at least 80% confident that the true proportion lies within 5% on either side of the proportion you estimate. This sample size is acceptable for this confidence level regardless of the population of the community.

How do we select these 200 households? Because it is recommended that the survey be conducted over a telephone, you need to randomly select telephone numbers to call. Some telephone listings are no longer valid; some residents will prefer not to participate in the survey; and some numbers are for households outside the local government's

boundaries. Thus, you will need to select approximately 300 non-commercial telephone numbers to arrive at a final sample size of 200.

Step 1 – Get the telephone numbers in your area. If the area does not have a separate section in the telephone book (i.e., the listings are combined with other areas), identify the telephone prefixes for your area. Include all telephone prefixes that cover residential numbers for your area.

Step 2 – Estimate the total number of household telephone listings in the entire area. This can be done by estimating the number of non-commercial telephone listings on an "average page" of your area's listings (if combined with other communities estimate only the number of listings with local prefixes) and multiplying by the number of pages in your area's section.

Step 3 – Select a proportion of listings from each page that equals the number of telephone numbers needed divided by the total number of household listings estimated in the area. For example, if you need telephone numbers for 300 households, and there are 2,100 non-commercial listings, select every seventh (300/2,100 – 1/7) non-commercial listing on each page. If there are fewer than 300 households within the area, every number should be selected.

It is important that these numbers be selected randomly to reduce bias. Because telephone numbers are listed by last name, there is the possibility that in some areas, large numbers of ethnic groups are clustered together. Thus, it is important to follow the selection proportion throughout the area's telephone listings. Do this even if the required number of telephone numbers (300) is surpassed. Otherwise, groups of households whose needs might be significantly different from others might be eliminated. Remember, 300 is the approximate minimum number of telephone numbers needed to arrive at a final sample of 200 households. More than 300 is fine. Less than 300 might require that the telephone listings be entered again and additional numbers randomly selected.

Step 4 – Write these numbers down on small pieces of paper and mix them together in a container. If these steps have been done correctly, each household in the community has had an equal chance of having its telephone number in that container.

The Inquiry

The recommended survey instrument is a telephone interview (see Appendix A). The person interviewed should be the "head-of-household" who can answer questions about their household's recreation needs.

The interview begins with an inquiry into the activities members of the respondent's household participated in during the last 12 months within the area. Many of the

activities listed may not be currently available within the service area being surveyed. For instance, an area might not currently have opportunities for golfing because it has no golf course. However, it is important to present a full range of possible activities because, in the next question, respondents are asked to indicate which activities they would like to participate in but for some reason don't. Respondents are then asked to indicate the barriers to their participation. Preceding these questions with a full range of activities allows the respondent to become aware of what activities are possible.

Also addressed in the survey is the adequacy of the area's outdoor recreation opportunities. This is accomplished by focusing on activities the household feels are in need of additional facilities or opportunities, the distribution of active vs. passive opportunities, need for specific outdoor recreation facilities, and opportunities for children, the elderly and the handicapped.

The respondents are then asked to express what they feel is the most important outdoor recreation issue facing the area and the State of Montana. The interview ends with a few questions that are useful in describing the household and the respondent.

At least 200 surveys should be reproduced so that there is a copy for each household that is interviewed. The responses should be recorded directly on the survey.

Agency staff or other interested persons can do the interviewing. All interviewers should be thoroughly familiar with the interview. An interviewer should practice interviewing with others before contacting the public.

The best time to call is when most people are home, usually during the evening hours. If there is no answer, or the heads-of-households are not at home, try again at another time. At least tree attempts at contact should be made. The number of households that decline to participate in the survey should be noted. This number should include households only, and not include disconnected numbers, businesses or other commercial listings contacted by accident.

Public Awareness

Conducting a telephone survey in today's world is becoming increasingly difficult. Modern technology now allows users to identify and block calls originating from strangers. Therefore, to increase cooperation in the survey, it is imperative that local governments conduct a public awareness campaign to alert residents that an outdoor-recreation survey will be performed. The important part of the message is to explain how the information will be used (to apply for an outdoor recreation grant). This should help increase participation. Publicity can be accomplished in a number of ways, such as through public service announcements in local schools and churches; by short notices in newsletters, posters, and fliers; and through ads in local newspapers, on radio, and TV.

Data Tabulation

Although computers have established themselves as an important element of modern life, many local governments do not have access to the statistical packages commonly used for data analysis. Luckily, the data gathered from this needs assessment are neither complicated, nor large, and can be easily handled without a computer with the aid of a simple calculator.

As was mentioned earlier, you are primarily concerned with proportions. For instance, the proportion of households that played softball within your area. Thus, for each question, we need to know how many respondents gave each answer. This number, divided by the total number of interviews, is that proportion. For example, if 30 of the households played softball, and we contacted a total of 200 residents, the 30/200 = 15% of the population participated in softball.

Appendix B contains forms that will assist you in tabulating the results. Each form has examples that illustrate how they are to be used.

The questions in the survey are one of two types: "Forced Choice" or "Open Ended." In the first type (forced choice) the respondent is presented with a variety of answers to choose from. Forced-choice questions have answers that are pre-categorized (Question 4). Open-ended questions allow the respondent to answer in a less restrained manner. In some instances, the most common responses have been anticipated, and categories have been developed (see last part of Question 2). In other cases, none or only some of the answers have been anticipated (Questions 3 & 5).

The responses to these questions need to be categorized and tabulated in forms that allow for this procedure. Some of the questions will have responses that require careful content analysis to accurately accomplish this task.

When these tabulation forms have been completed, the outdoor recreation needs of your community's residents have been assessed. Copies can be included with your applications for LWCF Grants.

LOCAL RECREATION SURVEY
Part A

Hello, my name is _____. I'm calling from the _____ (agency) here in _____ (local gov't.). Am I talking to the head of your household?

No	Could I please talk to that person? (call back at:)
Yes	CONTINUE

We're currently working on a local outdoor recreation survey in conjunction with Montana Fish, Wildlife & parks. The purpose of the survey is to determine the outdoor recreation needs of our local residents. The survey will take only a few minutes. Are you willing to participate?

If NO—Is there a more convenient time I could call back?
Call back at: _____

If YES—CONTINUE WITH THE SURVEY

1. Local governments often offer a variety of recreational opportunities for their residents. I'm going to read a list of outdoor recreational activities. Please tell me whether you, or another member of your household, have participated in any of these activities within the last 12 months.

(Read the list and check all that apply)

___ Walking for pleasure	___ Skateboarding
___ Hiking	___ In-line Skating (rollerblading)
___ Jogging	___ BMX Biking
___ Fishing	___ Sailing
___ Hunting	___ Horseback riding
___ Bicycling	___ Canoeing
___ Mountain Biking	___ Kayaking
___ Nature study/bird watching	___ Rafting
___ Picnicking	___ Football
___ Camping	___ Golf
___ Backpacking	___ Baseball or softball
___ Off road 4x4 driving	___ Soccer
___ Off road motorcycling	___ Basketball
___ Off road ATV driving	___ Rodeo activities

___ Motor boating
___ Swimming in lake, pond, river or stream
___ Swimming in a pool
___ Water-skiing
___ Tennis
___ Snowmobiling
___ Downhill skiing
___ Snowboarding
___ Track & Field
___ Motocross
___ Playground activities
___ Lawn games such as croquet or volleyball
___ Fitness course activities
___ Target shooting
___ Ice skating
___ Cross-country skiing
___ Windsurfing
___ Frisbee Golf (Folf)
___ Rock Climbing
___ Rock collecting

Are there any other outdoor recreational activities that you or another member of your household participated in within the limits of _____ (local gov't.) that I didn't mention?

(check one)

___ No--Go to Question 2
___ Yes--Which ones? Specify: _____

2. One area of particular concern relates to the present supply of outdoor recreational opportunities in _____ (local gov't). Are there certain kinds of outdoor recreational activities that you, or a member of your household, would like to participate in, but cannot, in _____ (local gov't)?

(check one)

___ No--Go to Question 3

___ Yes--Which ones?

Activity	Major Reason (see codes)

What is the MAJOR REASON you don't (state activity) as often as you would like to in _____ (local gov't)? (Leave open-ended and fill in ONE reason code next to each activity).

Reason Codes

1 Lack of money

2 Lack of time
3 Lack of facilities
4 Lack of personal equipment
5 Lack of safety
6 Lack of skill
7 Lack of information
8 Lack of landscape features (no lakes, no hiking trails, etc.)
9 Lack of physical capability (age, health, etc.)
10 Lack of other participants
11 Lack of child care
12 Too crowded at existing areas
13 Other reason

3. We're interested in your feelings about the adequacy of outdoor recreation facilities in _____ (local gov't). Which ONE outdoor recreation activity do you feel is in the greatest need of additional facilities or opportunities for your household's enjoyment? _____

4. So far, our survey has concentrated on the more active types of recreational pursuits. Do you feel that any additional parks in _____ (local gov't) should be: (Read the list and circle one)

a. Used mostly for active recreation
b. Mostly for passive, non-active recreation
c. Evenly distributed between the two
d. Don't know.

5. Many local governments offer several types of recreation sites for public use, such as swimming pools, sports playing fields, playgrounds, neighborhood parks, open spaces and so on. If additional funds become available, which kind of outdoor recreation area would your household prefer? (Leave open-ended and check only ONE).

___ Swimming pool
___ Playgrounds
___ Tot lots
___ Open space
___ Parks
___ Skateboard facility
___ OHV area
___ Jogging path
___ Bicycle path
___ Ice skating rink

___
___ Tennis courts
___ Basketball courts
___ Picnic areas
___ Golf course
___ Sports playing fields (specify type) _____
___ Other (specify) _____

6. Do you feel there are adequate outdoor recreation opportunities in _____ local gov't) for children, the elderly and people with disabilities?

___ Yes--Go to Question 7
___ Don't Know--Go to Question 7
___ No--What type of additional opportunities would you say are needed?

(Leave open-ended and check those mentioned).

___	Children	___	Elderly	___	Handicapped
___	Playgrounds			___	Better access
___	Tot lots			___	Wheel chair trails
___	Swimming pools			___	Trails for the blind
___	Wading pools			___	
___	Parks			___	
___	Sports playing fields (specify)			___	
___	Other (specify)				

7. What do you feel is the MOST IMPORTANT OUTDOOR RECREATION PROBLEM OR CONCERN facing:

   a. (Local gov't) today? _____

   b. The State of Montana? _____

8. To finish up, we need to know some things about you to help us understand your needs better.
   a. How many people are in your household, including yourself? ____
   b. What is your age? _____
   c. Sex: (should be obvious) ____ Male ____ Female
   d. Do you live within the official boundaries of (local gov't.)?

_____ Yes _____ No

Those are all the questions I have. Thank you very much for taking the time to participate in the survey--we appreciate your willingness to help.

PART B
Data Tabulation Forms

Summary Information

LOCAL GOVERNMENT NAME

_____

Name of PERSON IN CHARGE of Survey:

_____

SURVEY DATES:

From _____ To _____

Estimated number of HOUSEHOLDS IN COMMUNITY:

_____

Number of HOUSEHOLDS SURVEYED:

_____ = X

Number of HOUSEHOLDS THAT DECLINED TO PARTICPATE:

_____ = Y

RESPONSE RATE = X / (X + Y) = _____

Example: If X = 198 and Y = 72,

then X / (X + Y) = 198 / (198 + 72) = 0.73 = 73%

Question 1 = Participation Rates

Activity	**Tally**	**Rate = Tally / X**
Jogging		
Horseback riding		
Bicycling		
Walking for pleasure		
Nature study or bird watching		
Picnicking		
Camping		
Backpacking		
Off road 4x 4 driving		
Off road motorcycling		
Fishing		
Hunting		
Swimming in a lake, pond, river or stream		
Swimming in a pool		
Water-skiing		
Motorboating		
Windsurfing		
Sailing		
Canoeing		

(X = Total tallies)

Example: bird watching	**I I I I I I I I**	**8/198 = 0.04**

Question 1 = Participation Rates (continued)

Activity	**Tally**	**Rate = Tally / X**
Kayaking		
Rafting		
Football or soccer		
Golf		
Baseball or softball		
Tennis		
Basketball		
Lawn games such as croquet or volleyball		
Playground activities		
Rodeo activities		
Target shooting		
Ice skating		
Snowmobiling		
Cross country skiing		
Downhill skiing		
Soccer		
Mountain biking		
Off road ATV driving		

Snowboarding		
Track & field		
(X = Total tallies)		
Example: bird watching	**I I I I I I I I**	**8/198 = 0.04**

Question 1 = Participation Rates (continued)

Activity	**Tally**	**Rate = Tally / X**
Motocross		
Skateboarding		
In-line skating (rollerblading)		
BMX Biking		
Hiking		
Frisbee Golf (Folf)		
Rock Climbing		
Rock Collecting		
Fitness course activities		
(X = Total tallies)		
Example: bird watching	**I I I I I I I I**	**8/198 = 0.04**

Question 2 – Non-Participation Activities and Reasons

Don't Participate?	Tally	Proportion = Tally / X
No		
Yes		
TOTAL		

Example:

Activity: Golf

Reason Codes	Tally	Prop. = Tally / X
01	I I I	3 / 198 = .015
02	I I	2 / 198 = .010
03		
04	I	1 / 198 = .005
05		
06	I I I I	4 / 198 = .020
07		
08		
09		
10		
11		
12	I I I I I I	6 / 198 = .030
13	I I	2 / 198 = .010
TOTAL		18 / 198 = .091

Activity:

Reason Codes	Tally	Prop. = Tally / X
01		
02		
03		
04		
05		
06		
07		
08		
09		
10		
11		
12		
13		
TOTAL		

Total = X 1.00 = 100%

Reason Codes

1	Lack of money	8	Lack of landscape features
2	Lack of time	9	Lack of physical capability
3	Lack of facilities	10	Lack of other participants
4	Lack of equipment	11	Lack of child care
5	Lack of safety	12	Too crowded at existing areas
6	Lack of skill	13	Other reason
7	Lack of information		

Question 2 – Non-Participation Activities and Reasons (continued)

Activity:

Reason Codes	Tally	Prop. = Tally / X
01		
02		
03		
04		
05		
06		
07		
08		
09		
10		
11		
12		
13		

Activity:

Reason Codes	Tally	Prop. = Tally / X
01		
02		
03		
04		
05		
06		
07		
08		
09		
10		
11		
12		
13		

TOTAL	**TOTAL**

Reason Codes

1	Lack of money	8	Lack of landscape features
2	Lack of time	9	Lack of physical capability
3	Lack of facilities	10	Lack of other participants
4	Lack of equipment	11	Lack of child care
5	Lack of safety	12	Too crowded at existing areas
6	Lack of skill	13	Other reason
7	Lack of information		

Question 3 – Activity in Greatest Need

Activity	**Tally**	**Proportion = Tally / X**

Example: Swimming	**I I I I I I I I**	**8/198 = 0.04**
		0.04 = 40%

Question 4 = Additional Parks

For	**Tally**	**Proportion = Tally / X**
Active Recreation		
Passive Recreation		
Evenly Distributed		
Don't Know		
TOTAL (X)		

Note: 1.00 = 100%**Question 5 – Kind of Area Preferred**

Area	**Tally**	**Proportion = Tally / X**
Bridle Path		
Swimming Pools		
Playgrounds		
Tot Lots		
Open Space		
Parks		

Jogging Paths		
Bicycle Paths		
Ice Skating Rinks		
Tennis Courts		
Basketball Courts		
Picnic Areas		
Golf Courses		
Skateboarding Facility		
OHV Area		
Example: Bridle Path	**I I I I**	**4 / 198 = .020**

Question 5 – Kind of Area Preferred (continued)

Area	Tally	Proportion = Tally / X
Example: Bridle Path	**I I I I**	**4 / 198 = .020**

Question 6 – Opportunities for Children, the Elderly, or People with a Disability

Adequate?	Tally	Proportion = Tally / X
Yes		
Don't Know		
No		
TOTAL		

If NO, then

Children		
Elderly		
People with a Disability		

Type	Tally	Proportion = Tally / X
Playgrounds		
Tot Lots		
Swimming Pools		
Wading Pools		
Parks		
Better Accessibility		
Wheel Chair Trails		
Trails for the Blind		

Question 7a – Concerns Facing Area

Concern	Tally	Proportion = Tally / X

Example: Lack of Funding **I I I I I I I I I I I I** **12 / 198 = .061**

Question 7b – Concerns Facing Montana

Concern	**Tally**	**Proportion = Tally / X**

Example: River Access **I I I I I I I I** **8 / 198 = .040**

Question 8a – Size of Household

Sizes: (Example: 3, 1, 6, 4, 4, 2)

Summation of Sizes: _____ = A
(Example: 3 + 1 + 6 + 4 + 4 + 2 = 20)
Mean Household Size = A / Number of Households = _____
(Example: 20 / 6 = 3.3)

Question 8b – Age of Respondent

Ages: (Example: 31, 45, 21, 52, 19, 73)

Summation of Ages: _____ = B
(Example: 31 + 45 + 21 + 52 + 19 + 73 = 241)
Mean Respondent Age = B / Number of Persons = _____
(Example: 241 / 6 = 40.2)

Question 8a – Sex of Respondent

Sex	Tally	Proportion = Tally / X
Male		

Female

TOTAL

(Total = X) **1.00 = 100%**

Jeffrey E. Frost and Stephen F. McCool, School of Forestry, University of Montana, originally developed this survey in 1985 for Montana Fish, Wildlife & Parks.